

TECHNETICS' CUSTOM RPV SEALS

Extend German Nuclear Power Plant's Operations



Energy Challenges

One of the main challenges is a shortage of electric energy in the power distribution grid. This shortage has been caused by several factors, including the closure of several nuclear power plants (NPPs) in the country, which has reduced the energy supply. In response, the German government agreed to **extend the operation of the remaining NPPs** in their regular service until at least April 2023.

Many are concerned about the recent German energy crisis's effects on the economy, private households, and the wider European power grid. As such, the German government is facing increasing pressure to address the crisis.

Extending the Isar 2's Energy Production

As one of the remaining NPPs, PreussenElektra's Isar 2 is a 1450 MWe pressurized water nuclear power reactor facing a shortage of Reactor Pressure Vessel (RPV) seals, one of **the most crucial parts of an NPP** as they keep the pressurized water from leaking into the environment. Thanks to our longstanding relationship and expertise in the nuclear industry, we were able to develop a custom solution for PreussenElektra.

Requiring RPV seals, O-rings, and 195"/190" diameter seals made of Inconel 718 and silver electroplated, we supplied one set of RPV O-rings that arrived at the NPP site before Christmas 2022. The manufacturing process, including source inspection and airfreight from Atlanta, GA, to Frankfurt, Germany, and onward to Bavaria, was managed with great care to ensure timely delivery.



Technetics' RPV Seals Help Provide Energy to Germany

Our process for creating the Isar 2 RPV seals was flawlessly executed to accommodate PreussenElektra's requirements.

First, the source inspection at TG Columbia was completed satisfactorily, and the shipping approval was obtained as planned. Then, we worked with Isar 2 to ensure the solution arrived during their scheduled

outage. These outages occur every 12-18 months and are a standard procedure for pressurized water nuclear power reactors to reorganize nuclear fuel bundles inside the reactor and ensure that all fuel is burned off equally, optimizing efficiency and reducing costs.

The RPV seals arrived on time and were installed with no issues or unplanned downtime, allowing the entire process to be carried out with precision and efficiency. As a result, the installation of the RPV seals was completed successfully, enabling the Isar 2 nuclear power plant to resume normal operations without any further disruptions to the German energy supply.

The successful installation of the RPV seals helped to prevent further disruptions to the German energy supply and ensure the safety of the Isar 2 nuclear power plant.

Technetics: Your Trusted Nuclear Seal Provider

Solutions like these are crucial to keeping NPPs operational. Technetics' expertise in manufacturing high-performance sealing and component solutions has provided a viable solution to address the shortage of spare parts and help prevent any further disruption.

As a trusted provider of custom nuclear seal solutions worldwide, we are committed to continuing our partnership with energy companies to provide **reliable and high-performance sealing and component solutions for the nuclear industry**.

Contact us today to learn more about our capabilities and how we can help you ensure the safety and efficiency of your nuclear power plant!

